



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

March 31, 2015

Susan Stracquatano, Agent  
Arborjet, Inc.  
c/o Delta Analytical Corporation  
12510 Prosperity Dr. Suite 160  
Silver Spring, MD 20904

Subject: Label Amendment – Amending PPE statement and adding pollinator language to the Environmental Hazards section  
Product Name: Ace-Jet  
EPA Registration Number: 74578-2  
Application Date: January 12, 2015  
Decision Number: 499261

Dear Ms. Stracquatano:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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EPA Reg. No. 74578-2  
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with FIFRA section 6. If you have any questions, please contact Eric Bohnenblust by phone at (703) 347-0426, or via email at [Bohnenblust.eric@epa.gov](mailto:Bohnenblust.eric@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Gebken", written in a cursive style.

Richard Gebken  
Product Manager 10  
Invertebrate & Vertebrate Branch 2  
Office of Pesticide Programs

Enclosure



**ACCEPTED**  
 03/31/2015  
 Under the Federal Insecticide, Fungicide  
 and Rodenticide Act as amended, for the  
 pesticide registered under  
 EPA Reg. No. 74578-2

# ACE-jet

[Systemic Insecticide][Arboriculture in Motion][Diverse Insect Pest Control]  
 [Systemic Insecticide for Micro-Infusion]

**Micro-Injectable and Micro-Infusible Insecticide for use with the *Arborjet Injection Systems* in the Management of Specific Insect Pests of Trees & Landscape Ornamentals including Conifers, Christmas Tree & Deciduous Tree Farms, Seed Orchards and Plantations, and Forest Trees.**

Active Ingredient:

Acephate

[O,S-DIMETHYL ACETYL PHOSPHORAMIDOTHIOATE].....	97.4%
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Other Ingredients.....	2.6%
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Total.....	100.0%
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EPA Reg. No. 74578-2

EPA Est. No. 74578-MA-001

**STOP— read the entire label before use.  
 KEEP OUT OF REACH OF CHILDREN**

## CAUTION

**ADVISO:**

Precaución al usuario: Si usted no puede leer o entender ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

To the user: If you cannot read or understand English, do not use this product until the label has been fully explained to you.

Manufactured by: Arborjet, Inc.  
 99 Blueberry Hill Rd  
 Woburn, MA, 01801  
 1-866- ARBORJT (272-6758)

Net Contents: 20pc. 15 gram packets

## Precautionary Statements

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed. Avoid contact with eyes, skin and clothing. Avoid breathing dust or spray mist. Wash hands thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some Materials that are chemical-resistant to this product are polyethylene and polyvinyl chloride.

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Socks and shoes
- Chemical resistant gloves
- Protective eyewear

In addition, all mixers and loaders must wear a NIOSH approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH approved respirator with any N,R, P or HE filter. A respirator is not required during tree injection.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### USER SAFETY REQUIREMENTS

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### FIRST AID

##### IF SWALLOWED

- Call Poison Control Center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

##### IF IN EYES

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present after 5 minutes, then continue rinsing eye.
- Call a Poison Control Center or doctor for further treatment advice.

##### IF INHALED

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- Call a Poison Control Center or doctor for further treatment advice.

##### IF ON SKIN OR CLOTHING

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a Poison Control Center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the National Poison Control Hotline at **1 800 222-1222**, 24 hours a day, 7 days a week.

**Note to Physician:** Organophosphates are cholinesterase inhibitors. If signs of cholinesterase inhibition appear, atropine is antidotal. 2-PAM also may be used in conjunction with atropine but should not be used alone.

**ENVIRONMENTAL HAZARDS:** This pesticide is highly toxic to birds. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the high water mark. Do not contaminate water when disposing of equipment wash water. This product and its degradate are highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

**PHYSICAL OR CHEMICAL HAZARDS:** Do not use or store near heat or open flame.

## DIRECTIONS FOR USE

It is in violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or indirectly through drift. Only protected handlers may be in the area during application. For requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

For agricultural and commercial use only. Not for use or storage around the home.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and the Worker Protection Standard, 40 CFR 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE). The requirements in this box only apply to uses of this product that are covered by the Workers Protection Standard.

No Worker Protection Standard worker re-entry restrictions or worker notification requirements apply when this product is injected into agricultural trees.

**IMPORTANT:** Read the entire label before use. Failure to follow label directions may result in poor control or plant injury. Failure to follow label directions may cause injury to people, animals and environment. The buyer accepts and understands that failure to follow label directions is the responsibility of the buyer.

Do not use this product on food bearing trees or shrubs or on trees or shrubs that will bear food within one year after application.

## APPLICATION TO ORNAMENTALS

ACE-jet is for use on trees & landscape ornamentals including conifers, Christmas tree & deciduous tree farms and plantations. ACE-jet is an infusible insecticide formulated to translocate in the plant vascular system from the microinjection site(s). To assure optimum effectiveness, this product must be placed into the active sapwood.

## Directions

ACE-jet is designed for use only with the Arborjet Tree Injection Systems specified on this label.

The specified dosages and number of application sites are based on tree diameter. Measure the tree diameter at chest height (54" from ground) in inches to find the Diameter at Breast Height (DBH). If measuring circumference, divide this number by three to determine Diameter at Breast Height (DBH).

Best uptake is in trees in full leaf. Conditions that favor transpiration (i.e., sunny, breezy, low humidity) are optimal for injection uptake. Treat conifers in the early morning during hot, dry periods for optimum uptake. Micro-Injection of trees stressed by drought or extreme heat may result in poor uptake or foliar injury. Irrigate trees prior to treatment for optimal product uptake.

### Arborjet Micro-Injection and Micro-Infusion™ Procedures

In choosing between Micro-Injection and Micro-Infusion™ procedures, it is important to consider treatment needs. Micro-Injection applications are designed for shorter-term activity against pests as compared to Micro-Infusion™. Micro-Infusion™ dosages are designed to deliver higher volumes to compensate for the drop in concentration of A.I. reported in large trees and to extend the period of product activity against pests as compared to a Micro-Injection application. For optimum distribution, inject into the sapwood tissues at the base of the tree. Work around the tree, injecting no closer than 6.0 inches apart.

#### Basic Arborjet VIPER Procedure

Drill through the bark then 5/8" to 1-5/8" (in hardwoods) or 1-5/8" to 2" (in conifers) into the sapwood using the appropriate sized drill bit. Brad point bits are recommended, and all drill bits should be clean and sharp. Insert the Arborplug™ with the set tool and mallet tapping in to the point where the bark and sapwood meet.

#### Alternative Arborjet STINGER Procedure

Alternatively insert the (7/32" drill bit) STINGER injector tip 5/8" deep into the sapwood with a hand push or by gently tapping the injector tip into predrilled hole with a mallet. Remove STINGERS upon completion of infusion process by twisting and pulling out counter-clockwise. We recommend using a disinfectant such as CLEAN-jet, between trees when using the reusable STINGER tips.

#### Resinous Conifers

In resinous conifers, such as pine and spruce, start the injection and/or infusion process immediately after drilling or following the setting of the Arborplug™ into the sapwood. A prolonged delay may reduce uptake efficacy due to resin flow.

#### Ornamental Monocots

Make applications low in the stem, typically within 12" of the soil. Avoid wounding the meristematic tissue located within the crown of the plant. In palm\*, drill into the central vascular bundle approximately one-third into the stem, insert an Arborplug™ 5/8" deep to form a seal and use the VIPER needle to complete the application. Only one site is needed.

\*Not for use in California

#### Mixing Instructions

Mix each 15 gram ACE-jet packet per 100 milliliters of water. Refer to the Dosage Tables below to determine the number of packets and total volume needed to be mixed for tree application. Mix only the amount needed for immediate use. Empty the contents of the packet into the injection canister. Add the appropriate amount of water to the container. Use distilled water or acidic to neutral water (pH 5.5 – 7.0). Close the container by screwing on the lid. Next, swirl the contents THOROUGHLY until all the ACE-jet is dissolved.

## Arborjet Systems

### Air/Hydraulic Micro-Injection Application

Prepare the solution following the mixing instructions above. To inject, set the primary regulator to 75 PSI, charge the Dose-Sizer by pulling back on Dose-Sizer knob after priming, and apply the specified dose equally into the preset Arborplug™ ports.

### Hand-Operated Micro-Injection Application

Prepare the solution following the mixing instructions above. Close and hand pump or pressurize to between 15 and 25 PSI. Charge the Dose-Sizer by pulling back on Dose-Sizer knob, then apply specified dose equally into the preset Arborplug™ ports.

### Quick-jet Micro-Injection Application

Prepare the solution following the mixing instructions above. To Micro-Inject, set the Arborjet Tree Micro-Injector to the 3 mL/per shot setting. Draw formulation into the injector cylinder and squeeze handle to deliver the shot. Repeat until the full dose per injection site is delivered.

Refer to the **Tree Micro-Injection Dosages Table** to determine the volume in milliliters to be delivered and number of injection sites to apply.

### Tree Micro-Injection Dosages Table

(for use with micro-injection devices)

Dose specified is per injection site. Dosages are based on one injection site for every 6" of stem circumference; designed for shorter-term activity against pests as compared to a Micro-Infusion™ application.\*\* Repeat applications as needed.

Tree DBH"	# injection sites*	mLs/injection site	mLs applied/tree
5 - 7"	3	9	27
8 - 10"	5	9	45
11 - 13"	6	9	54
14 - 16"	8	9	72
17 - 19"	9	9	81
20 - 22"	11	9	99
23 - 25"	12	9	108
26 - 28"	14	9	126
29 - 31"	15	9	135
32 - 34"	17	9	153
35 - 37"	18	9	162
38 - 40"	20	9	180
41 - 43"	21	9	189
44 - 46"	23	9	207
47 - 49"	24	9	216
50 - 52"	26	9	234
53 - 55"	27	9	243
56 - 58"	28	9	252
59 - 61"	30	9	270
62 - 64"	32	9	288
65 - 67"	33	9	297
68 - 70"	35	9	315
71 - 73"	36	9	324

\*The number of injection sites may be reduced to one injection site every 8" of stem circumference; however, the mLs/injection site needs to be increased to 13.5 mLs to deliver the specified dosage in the Tree Micro-Injection Dosages Table.

\*\*Refer to the Micro-Infusion™ Dosage Table for high rate applications.

### Tree I.V. Micro-Infusion™ Application

Prepare the solution following the mixing instructions above. Close and pressurize the contents from 25 to 60 PSI and prime the lines by opening each injector valve slowly to purge the air. Insert the VIPER needle into the Arborplug™ port to begin the infusion. Remove when application is complete.

Refer to the **Micro-Infusion™ Dosages Table** to determine the volume in milliliters to be delivered and number of application sites to apply.

### Micro-Infusion™ Dosages Table (for use with the Arborjet Tree I.V.)

Low dose may be used in trees with small canopies or light (or early) infestations; use the higher dosages in trees with large canopies or moderate to severe (or late) infestations.

Tree DBH"	# injection sites	mLs applied/tree (low)	mLs applied/tree (high)
5 - 7"	4	33	50
8 - 10"	4	50	75
11 - 13"	4	75	100
14 - 16"	6	100	125
17 - 19"	6	125	150
20 - 22"	8	150	175
23 - 25"	8	175	200
26 - 28"	10	200	250
29 - 31"	10	225	275
32 - 34"	12	250	325
35 - 37"	12	275	375
38 - 40"	14	300	425
41 - 43"	14	350	475
44 - 46"	16	375	550
47 - 49"	16	400	600
50 - 52"	18	450	650
53 - 55"	18	475	725
56 - 58"	20	500	775
59 - 61"	20	525	800
62 - 64"	22	550	800
65 - 67"	22	550	800
68 - 70"	24	550	800
71 - 73"	24	550	800

### Clean-up

**IMPORTANT!** It is critical to rinse the Arborjet System thoroughly after use. Use **CLEAN-jet**, soap and water or isopropyl alcohol. Residues left in the device may gum the internal components.

## Compatibility

ACE-jet is compatible with all Arborjet fertilizers including the MICRO-jet infusible series. However, the physical compatibility of ACE-jet should be tested before use with other products.

To determine the physical compatibility of ACE-jet with other products, use a jar test as described below.

1. Using a pint jar, add the proportionate amounts of the two products to 1 pint of water.
2. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed, it is physically compatible. If precipitates form, the combination is incompatible.
3. Once compatibility has been proven acceptable, use the same procedure for adding required ingredients to the formulation tank.

User must comply with all applicable directions, restrictions and precautions on the EPA-registered label when using any pesticide in tank mix combinations. The most restrictive labeling applies when using a tank mix.

**NOTE:** The safety of all potential tank mixes on all trees listed on this label may not have been tested. Before applying any tank mixture not specifically recommended on this label, the safety to the target tree should be tested. It is not advisable to apply pesticides via trunk injection or infusion applications that do not completely dissolve or disperse in solution. Application of liquid flowables, suspension concentrates, or dispersible granules that do not completely dissolve is NOT recommended.

**CAUTION:** Phytotoxicity has been reported in some crabapple cultivars.

## When to Treat

Apply when signs of insects first appear. ACE-jet is effective against actively feeding insects. However, insect activity should be monitored to establish a damage threshold for retreatment. Repeat applications as necessary.

<b>Use in Trees, Ornamentals, Forests, Seed Orchards and Tree Plantations against certain Coleopteran Pests including Cambial and Wood-boring Insects**</b>	
<b>CROP</b>	<b>PEST</b>
Trees, Shrubs, Evergreens, Conifers, Christmas Tree Plantations, & Palms*.  In Forest Areas, including non-urban forests, tree plantations, and seed orchards, parks, rural shelter belts, rangeland trees, and woodland trees including conifers	<b>Coleoptera:</b> Buprestid Borers (including Bronze Birch Borer, and Emerald Ash Borer) Flatheaded Borers Elm Leaf Beetle (larvae) Japanese Beetle Leaf Beetles (larvae) (including elm and willow leaf beetles) Longhorned Borers (including Eucalyptus borer and Red Oak Borer) Root Weevil Adults (including Black Vine Weevil) White Pine Weevil

\*Not for use in California

\*\*For Control of Specified Borers: Application to trees already heavily infested may not prevent the eventual loss of the trees due to existing pest damage and tree stress.

**Use in Trees, Ornamentals, Forests, Seed Orchards and Tree Plantations against certain Lepidopterous larvae, Homopteran, Dipteran, Hemipteran, Hymenopteran and Thysanopteran Insects**

CROP	PEST
<p>Trees, Shrubs, Evergreens, Conifers, Christmas Tree Plantations, &amp; Palms*.</p> <p>In Forest Areas, including non-urban forests, tree plantations, and seed orchards, parks, rural shelter belts, rangeland trees, and woodland trees including conifers.</p>	<p><b>Chewing Insects including Lepidopterous larvae:</b>            Bagworm (<i>Thyridopteryx ephemeraeformis</i>)            Browntail Moth            Budworms            Cankerworms (Spring and Fall)            Carpenterworm (<i>Prionoxystus robiniae</i>)            Casebearer            Clear Wing Borers(<i>Parathrene dollii</i> and <i>P. tricincta</i>)            Cottonwood Twig Borer (<i>Gypsonoma haimbachiana</i>)            Eastern Oak Looper (<i>Phigalia titea</i>)            Eastern Tent Caterpillar (<i>Malscosoma americanum</i>)            Elm Spanworm (<i>Ennomos subsignarius</i>)            Fall Cankerworm (<i>Alsophila pometaria</i>)            Fall Webworm (<i>Hyphantria cunea</i>)            Gypsy Moth, (<i>Lymantria dispar</i>)            Leafrollers            Linden Looper (<i>Erannis tiliaria</i>),            Nantucket Pine Tip Moth (larvae)            Oakworms (<i>Anisota senatoria</i>, <i>A. virginiensis</i>, and <i>A. stigma</i>),            Pine Cone Worm (<i>Dioryctria spp.</i>)            Pine Needle Miners (including Ponderosa Pine)            Pine Tip Moth (<i>Rhyacionia spp.</i>)            Poplar Tentmaker (<i>Clostera inclusa</i>)            Spring Cankerworm (<i>Paleacrita vernata</i>)            Forest Tent Caterpillar, (<i>Malocosoma disstria</i>)            Tussock Moth            Variable Oakleaf Caterpillar (<i>Heterocampa manteo</i>)            Walnut Caterpillar (<i>Datana integerrima</i>)            Winter Moth (<i>Operophtera brumata</i>)            Whitemarked Tussock Moth (<i>Hemerocampa leucostigma</i>),            Yellownecked Caterpillar (<i>Datana ministra</i>)            Zimmerman Pine Moths</p> <p><b>Chewing and Mining insects:</b>            Leafminers            Gall Midges            Sawflies (larvae)            Birch Leafminer</p> <p><b>Piercing-Sucking Insects and Mites:</b>            Adelgids (including Hemlock Woolly Adelgid)            Aphids            Leafhoppers            Mealybug            Scale Insects            White flies            Lacebugs            Plant Bugs (Lygus)            Royal Palm Bugs            Boxelder Bug (<i>Leptocoris trivittatus</i>)            Thrips            Spider Mites</p>

\*Not for use in California

## RESTRICTIONS

Keep away from children.

Keep away from heat and open flame.

Do not treat trees that are moisture stressed or suffering from herbicide damage.

Do not inject trees within two weeks of any other spray or soil chemical treatment.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

**PESTICIDE STORAGE:** Keep product in original container. Store product in a cool dry place. Do not contaminate food or feedstuffs. Do not store or transport near feed or food.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product should be disposed of according to the Directions for Use, i.e. used as directed in the injection equipment.

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container. Completely empty contents of packets into injection equipment. Dispose of empty packets in a sanitary landfill or by incineration if approved by State and Local authorities. Offer cardboard container for recycling, if available.

*[Master label note, not part of labeling: Product must bear a batch code; may be placed anywhere on label or container.]*

## NOTICE OF WARRANTY

ARBORJET, Inc makes no warranty of fitness of this product for any other purpose, beyond its uses under normal conditions in keeping with the statements made on this label.

(Packet Label)

## ARBORJET

A Revolutionary Plant Injection System

### ACE-jet

Micro-Injectable and Micro-Infusible Insecticide for use with the *Arborjet Injection Systems* in the Management of Specific Insect Pests of Trees and Landscape Ornamentals including Conifers, Christmas Tree and Deciduous Tree Farms, Seed Orchards and Plantations, and Forest Trees

Active Ingredient: Acephate [O,S-dimethyl acetyl phosphoramidothioate]	97.4%
Other Ingredients:	2.6%
Total:	100.0%

### CAUTION

EPA Reg. No. 74578-2

EPA Est. No. 74578-MA-001

See Container Label for precautionary language and complete directions for use.

Net content: 15 grams